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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,946	12/14/2003	Jeffrey D. Davies	111803.P002	3727

7590 02/06/2007  
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EXAMINER
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SMITH, MATTHEW J

ART UNIT	PAPER NUMBER
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3672

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/06/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/735,946	Applicant(s) DAVIES, JEFFREY D.	
	Examiner Matthew J. Smith	Art Unit 3672	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 December 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-21, 29-35, 37, 38, 42 and 43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-21, 29-35, 37, 38, 42 and 43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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Claims 29-38, 42, and 43 have been withdrawn from being indicated as allowable and a new rejection made. This rejection is being reinstated because the reference has been re-interpreted and it has been determined that moving the drill mast from a horizontal to a vertical position can be read as removing the mast from the ATV and the drill mast brackets can be considered a drill mast stand.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19, 20, 29-32 37 42 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher (5363925) in view of Brazell, II (4938296).

Gallagher discloses an all terrain vehicle (ATV) 10; drill mast 14 removably coupled, via bearing 16, to the ATV; a hydraulic drill motor 24 configured to turn a drill bit (end of auger 26); the drill motor slidably disposed on the drill mast 14; a manual control 64 configured to operate the drill motor; a hydraulic pump 62; the drill mast configured to rotate about one or two axes relative to the ATV (col. 3, lines 52-56); and a solid stem auger for coring but not a power takeoff configured to deliver power from

an ATV engine; the drill motor powered from the power takeoff; the hydraulic pump operated by the power takeoff and the drill motor powered from the power takeoff.

Brazell, II presents a power takeoff delivering power from an ATV engine, the drill motor powered from the power takeoff (p.t.o.), the hydraulic pump operated by the power takeoff, and the drill motor powered from the power takeoff for a drilling rig (col. 3, lines 57-61).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to power the Gallagher drill motor with an engine p.t.o, as presented by Brazell, II and noting the Brazell, II suggestion (col. 3, lines 2-3) "...capable of being supported by a relatively small vehicle." The mast is not formed as a single piece with the ATV and thus can be removed. Also, "when the drill mast is removed from the ATV to facilitate drilling" can be interpreted as the drill mast 14 being removed from a position in Fig. 1 to a position in Fig. 2, which basically removes the drill mast from the ATV to a vertical drilling position. The "drill mast stand" can be interpreted as the drill mast support including brackets 46, 48, etc. shown in Fig.2 and columns 3 and 4, which is configured to receive the drill mast 14.

Claims 15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher in view of Brazell, II as applied to claim 29 above, and further in view of Moseley (5248001).

The combination discloses an ATV p.t.o powering a drill but not a sheave rotatably configured on the drill mast; a motor coupled with the sheave; an impact hammer raised by a flexible cord directed by the drill mast and received onto the sheave or the drill mast articulating in a ball and socket.

Moseley shows a sheave 24 rotatably configured on a drill mast 11; a motor 60 coupled with the sheave and driven by the p.t.o. (col. 5, line 26); an impact hammer 28 raised by a flexible cord 45, wherein the flexible cord is directed by the drill mast and is received onto the sheave; and the drill mast articulating in a ball and socket 129.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to substitute the combination sampling device with the Moseley sampling device as indicated by applicant "Many different types of drilling ... " [0059].

Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher in view of Brazell, II and Moseley as applied to claims 15 and 29, respectively, above, and further in view of Henson (4081040).

The combination discloses an ATV p.t.o powering an impact hammer type drill but not a sample tube that resides within the drill bit while the drill bit is turning such that the hole is bored with the sample tube contained within the drill bit; a core sample, the core sample collected once the drill bit reaches a depth by dropping the impact hammer on a sample tube extension member, the sample tube resides within the drill bit while

the drill bit is turning, such that the hole is bored with the sample tube contained within the drill bit.

Henson describes a sample tube 69 that resides within the drill bit 21 while the drill bit is turning, such that the hole is bored with the sample tube contained within the drill bit; a core sample, the core sample collected once the drill bit reaches a depth by dropping the impact hammer 78 on a sample tube extension member; the sample tube resides within the drill bit while the drill bit is turning, such that the hole is bored with the sample tube contained within the drill bit.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to substitute the combined sampling device with the Henson sampling device as indicated by applicant "Many different types of drilling ... " [0059].

Claims 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher in view of Brazell, II as applied to claim 29 above, and further in view of Rust et al.

The combination discloses an ATV p.t.o powering a drill but not a wireless link to provide control of the drill motor using a remote control device, the remote control device controlling a position of the drill motor on the drill mast, or the remote control device controlling a speed of rotation of the drill bit.

Rust et al. portray wireless control (col. 12, line 7) of a drilling operation utilizing the p.t.o. (col. 11, line 55).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to control the drill via remote control, as portrayed by Rust et al., in order to see the drill during drilling.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher in view of Brazell, II as applied to claim 29 above, and further in view of Davis (3794127).

The combination discloses an ATV p.t.o powering a drill but not hollow stem auger.

Davis depicts a hollow stem auger (col. 4, line 13) on a drill mast mounted on a vehicle.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to substitute the combination sampling device with the Davis sampling device as indicated by applicant "Many different types of drilling ... " [0059].

### ***Response to Arguments***

Applicant's arguments, see page 6, filed 1 December 2006, with respect to the rejections of claims 23-27, 36, and 39-41 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejections have been withdrawn.

However, upon further consideration, a rejection is made in view of Gallagher and Brazell.

The examiner contends the mast is considered "removed" from the stored position to the upright position, via support bearing 16, as opposed to, say, --detached then placed in the drilling position— from the ATV.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Poage (3454114) divulges a separate support base that supports the drilling means when "removed", not detached from the vehicle. Cooper (6533045) exhibits removing a drill frame from a vehicle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Smith whose telephone number is 571-272-7034. The examiner can normally be reached on T-F, 8-3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

MJS *MJS*  
26 January 2007

*[Signature]*  
Jennifer H. Gay  
Primary Examiner